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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Amr M. Mohsen

OFFICIAL

Assignee:

Aptix Corporation

Title:

FIELD PROGRAMMABLE PRINTED CIRCUIT BOARD

Serial No.:

08/632,298

Filed:

April 12, 1996

Examiner:

V. Trans

Group Art Unit:

2763

Docket No.:

Sir:

M-1007-6C US

San Jose, California July 16, 1998

COMMISSIONER OF PATENTS AND TRADEMARKS

Washington, D. C. 20231

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AMENDMENT

Group 2700

Please amend the above patent application as follows:

IN THE CLAIMS

Rewrite Claims 29, 37, 40, 42, and 57 as follows:

--29. (Twice amended) Structure comprising:

a board suitable for carrying electrically conductive traces;

a plurality of component contacts formed on said board for receipt of electronic components;

a plurality of electrically conductive traces formed on said board, each of said conductive traces being electrically connected to a corresponding one of said component contacts;

at least one programmable integrated circuit connected to said board and containing a plurality of electrically conductive leads, each of said conductive leads being electrically connected to a corresponding one of said conductive traces on said board thereby

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to form an electrically conductive path from each component contact to the corresponding conductive lead, said at least one programmable integrated circuit being programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said board] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said board; and

at least one bus for transmitting information between a computer and said at least one programmable integrated circuit.

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(Twice amended) Structure comprising:

a board suitable for carrying electrically conductive traces;

a plurality of component contacts formed on said board for receipt of electronic components;

a plurality of electrically conductive traces formed on said board, each of said conductive traces being electrically connected to a corresponding one of said component contacts; and

at least one programmable integrated circuit connected to said board, each programmable integrated circuit comprising:

a substrate;

a first set of electrically conductive leads formed across said substrate in a first direction;

a second set of electrically conductive leads formed across said substrate in a second direction not parallel to said first direction, at least one conductive lead in at least one of said first and second sets of conductive leads being divided into at least two electrically separate conductive segments; and

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means for programmably interconnecting selected ones of said conductive leads or segments;

wherein each of a selected number of said conductive leads of said at least one programmable integrated circuit is electrically connected to a corresponding one of said conductive traces on said board thereby to form an electrically conductive path from each component contact to the corresponding conductive lead; and

wherein said at least one programmable integrated circuit is programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said board] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said board.

40. (Twice amended) Structure comprising:

a substrate;

a plurality of component contacts formed on said substrate for receipt of electronic components;

a plurality of electrically conductive traces formed on said substrate, each of said conductive traces being electrically connected to a corresponding one of said component contacts; and

at least one programmable integrated circuit connected to said substrate and containing a plurality of electrically conductive leads, said at least one programmable integrated circuit being programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said substrate] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said substrate;

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[wherein each of said conductive leads of said at least one programmable integrated circuit is electrically connected to a corresponding one of said conductive traces on said substrate thereby to form an electrically conductive path from each component contact to the corresponding conductive lead; and]

wherein said component contacts and said conductive traces on said substrate have a standard configuration independent of the electronic components to be mounted on said substrate and the electrical function to be implemented by said electronic components when selectively interconnected by said at least one programmable integrated circuit.

(Twice amended) Structure comprising:

a main substrate;

a plurality of component contacts formed on said main substrate for receipt of electronic components;

a plurality of electrically conductive traces formed on said main substrate, each of said conductive traces being electrically connected to a corresponding one of said component contacts;

at least one programmable integrated circuit connected to said main substrate, each programmable integrated circuit comprising:

a chip substrate;

a first set of electrically conductive leads formed across said chip substrate in a first direction;

a second set of electrically conductive leads formed across said chip substrate in a second direction not parallel to said first direction, at least one conductive lead

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in at least one of said first and second sets of conductive leads being divided into at least two electrically separate conductive segments; and

means for programmably interconnecting selected ones of said conductive leads or segments;

wherein each of a selected number of said conductive leads of said at least one programmable integrated circuit is electrically connected to a corresponding one of said conductive traces on said main substrate thereby to form an electrically conductive path from each component contact to the corresponding conductive lead; and

wherein said at least one programmable integrated circuit is programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said main substrate] through said conductive leads to achieve a desired electrical function from the electronic components to be connected to said main substrate.

57. (Twice amended) Structure comprising:

a board suitable for carrying electrically conductive traces;

a plurality of component contacts formed on said board for receipt of electronic components;

a plurality of electrically conductive traces formed on said board, each of said conductive traces being electrically connected to a corresponding one of said component contacts;

at least one programmable integrated circuit connected to said board and containing a plurality of electrically conductive leads, each of said conductive leads being electrically connected to a corresponding one of said conductive traces on said board thereby to form an electrically conductive path from each component contact to the corresponding

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conductive lead, said at least one programmable integrated circuit being programmable [by a user through said conductive leads] to selectively interconnect said conductive traces [on said board] to achieve a desired electrical function from the electronic components to be connected to said board; and

at least one bus for transmitting information between a computer and circuitry on said board .--

REMARKS

Confirming what was discussed with the Examiner in the video interview on 8 July 1998, independent structure Claims 29, 37, 40, 42, and 57 have been amended to clarify the programmable capabilities of the recited programmable integrated circuits. Independent Claim 40 has also been amended to enter a missing "and to eliminate unnecessary language.

Please telephone Applicant's attorney at 408-45\(\beta\)-9200, ext. 1371, if there are any questions.

CERTIFICATE OF FACSIMILE

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

print name of person signing certification

Respectfully submitted,

Boneld J. Meetin

Ronald J. Meetin

Attorney for Applicant

Reg. No. 29,089

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FACSIMILE MESSAGE TRANSMITTAL FORM

(Prepare in Duplicate)

July 16, 1998

TO:

USPTO

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Group Art Unit: 2763

Attn: Examiner Vincent Trans

Tel:

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FROM:

Ronald J. Meetin

Applicant:

Amr M. Mohsen

Assignee:

Aptix Corporation

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FIELD PROGRAMMABLE PRINTED CIRCUIT BOARD

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V. Trans

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2763

Docket No.: M

M-1007-6C US

Number of Pages:

9 (total)

Sent By:

Pam Disney

Date Sent:

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Message:

Examiner Vincent Trans,

Enclosed are the following documents:

- 1. Transmittal Letter (2 pages); and
- 2. Amendment (6 pages).

Ron Meetin

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Commissioner of Patents and Trademarks Washington, D.C. 20231

Re:

Applicant:

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Assignee:

Aptix Corporation

Title:

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Examiner:

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Docket No.:

M-1007-6C US

Sir:

Transmitted herewith are the following documents in the above-identified application:

- (1) Amendment (6 pages);
- (2) this transmittal sheet (in triplicate).

X

No additional fee is required.

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CLAIMS AS AMENDED

	Claims Remaining After Amendment		Highest No. Previously Paid For		Present Extra		Rate	Additional <u>Fee</u>
Total Claims	58	Minus	58	=	0	x.	\$22	\$ 0.00
Independent						1 4		
Claims	12	Minus	12	=	0	X.	\$82	\$ 0.00
Fee of \$270 for the first filing of one or more multiple dependent claims per application								\$ 0.00
Total	additional fee for this	Amenda	nent:					\$ 0,00

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